Attorney Docket No.: 018765-9001

REMARKS

Claim 1 has been amended. The Examiner has allowed Claims 6, 7, and 13-15. Thus, upon entry of this Amendment and Response to Office Action, Claim 1-19 are pending in the Pending Application. No new matter has been added by the amendment of Claim 1. Further, the amendment to Claim 1 was made to correct a typographical error and not for purposes of patentability.

A. Objections to the Claims

The Examiner has objected to Claim 1, line 16, due to the following informality "...each of the remote unites...." The Examiner suggests the following change: "...each of the remote units..."

Claim 1 has been amended to replace "each of the remote unites" with -- each of the remote units--, thus implementing the Examiner's suggestion. Therefore, it is respectfully requested that the objection to Claim 1 be withdrawn.

B. Rejection of Claims 1, 2, 4, 5, 8, 9-12 and 16-19 under 35 USC 102(e)

The Examiner has rejected Claims 1, 2, 4, 5, 8, 9-12 and 16-19 under 35 U.S.C. § 102(e), as being anticipated by US Published Patent Application US2002/0003645 A1 ("Kim").

> "A claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently in a single prior art reference." MPEP §2131; Verdegall Bros. V. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987).

The Examiner has failed to set forth a prima facie case of anticipation because he has failed to show that Kim teaches all the limitations of Claims 1, 2, 4, 5, 8, 9-12 and 16-19. With regard to Claims 1, 2, 4, 5, 8, 9, and 10, Kim fails to teach a plurality of remote units, each of which receive a main signal including a plurality of secondary signals, where each of the remote units are able to select at least one secondary signal intended for it from the main signal. With regard to Claims 11, 12, and 16-19, Kim fails to teach (i) a first transmission support having a first end connected to the interface unit input and at least a second end connected to the interface

unit output; and (ii) a first remote unit having a first input directly connected to the interface unit output by the first transmission support and a second remote unit having a first input connected to the first output of the first remote unit by the first transmission support and a first output directly connected to the interface unit input by the first transmission support.

a. Rejection of Claims 1, 2, 4, 5, 8, 9, and 10

Kim discloses a mobile communication network that includes a plurality of compact base transceiver systems (BTS1-BTSn) connected in series with each other along a single optical fiber that is connected to a compact base transceiver system controller 18. [Kim, pg. 1, para. 11; para. 13; Fig. 2]. In Fig. 2, Kim shows multiple optical fibers (OL1-OLn), however, each of these optical fibers includes a plurality of compact base transceiver systems (BTS1-BTSn) connected in series with each other. As shown in Fig. 5, each of the compact base transceiver systems (BTS1-BTSn) includes an optical transponder (TP1-TPn). Through the optical transponders, the compact base transceiver systems (BTS1-BTSn) are connected in series with a single optical fiber 36. [Kim, pg. 2, para. 24, lns. 5-6].

The function an optical transponder (TP1, for example) is to remove signals received from the optical fiber 36 matching to the same part of the receiving compact BTS1, and amplify and transmit the remaining signals (those that do not match the receiving part of BTS1) to the next compact BTS (BTS2). [Kim, pg. 3, para. 29-31]. In other words, each optical transponder filters signals that fall within the range of the frequencies allocated to their associated compact BTS. [Kim, pg. 3, para. 29-31]. As noted by the Examiner and shown in Kim in Figs. 3-5, the compact BTS controller 18 produces a multiplexed signal that includes multiple digital signals. [Kim, pg. 2, para. 28, lns. 1-6]. However, as this multiplexed signal travels through the compact base transceiver systems (BTS1-BTSn) connected in series along a single optical fiber, the transponders (TP1-TPn) of each compact base transceiver system (BTS1-BTSn) remove a portion of the multiplexed signal and transmit the remainder. Thus, the compact base transceiver systems following BTS1, namely BTS2-BTSn will receive progressively less of the multiplexed signal with BTSn receiving only a single, non-multiplexed signal. As a result, not all BTSs receive the original multiplexed signal, or even a signal including a plurality of secondary signals.

Therefore, the system disclosed in Kim does not teach a plurality of remote units, each of which receive a main signal including a plurality of secondary signals, where each of the remote units are able to select at least one secondary signal intended for it from said main signal as recited in Claim 1 because the compact BTSs (other than BTS1) receive progressively less than the original multiplexed signal.

b. Rejection of Claims 11, 12 and 16-19

Claims 11, 12, and 16-19, Kim fails to teach (i) a first transmission support having a first end connected to the interface unit input and at least a second end connected to the interface unit output; and (ii) a first remote unit having a first input directly connected to the interface unit output by the first transmission support and a second remote unit having a first input connected to the first output of the first remote unit by the first transmission support and a first output directly connected to the interface unit input by the first transmission support.

As shown in Kim, Figs. 2 and 4, the multiple compact BTSs are connected on a single optical fiber. The single optical fiber carries the optical signals received and transmitted by the compact BTSs according to wavelength division multiplexing. [Kim, pg. 2, para. 25, lns. 1-4]. The optical fiber emanates from the compact BTS controller 18 and terminates at the last BTS. [Kim, Fig. 2]. Therefore, the optical fiber of Kim does not have a first end connected to the compact BTS controller's input and a second end connected to the compact BTS controller's output. In addition, because the single optical fiber of Kim does not begin and end at the compact BTS controller 18, it does not teach a first remote unit and a second remote unit connected together and to the output and input, respectively, of the interface unit by a transmission support. It is therefore respectfully requested that the rejection of Claims 1, 2, 4, 5, 8, 9-12 and 16-19 be withdrawn.

C. Rejection of Claim 3 under 35 USC 103(a)

The Examiner has rejected Claim 3 under 35 U.S.C. § 103(a), as being unpatentable over Kim in view of US Patent 6,674,966 ("Koonen").

Claim 3 depends from Claim 1. As discussed above in connection with the rejection of Claim 1, Kim does not teach a plurality of remote units, each of which receive a main signal including a plurality of secondary signals, where each of the remote units are able to select at

least one secondary signal intended for it from said main signal. Further, this element is not taught by Koonen.

The system described in Koonen (referring to Figure 5 in Koonen) includes a flexible wavelength router 73 that receives a signal from a base station controller 14 and divides the signal into multiple signals (wavelength channels) and routes them to the optical network units or ONUs (remote units) 74a-74n. The flexible wavelength router 73 includes a demultiplexer 80 (see Figure 6) that separates the wavelength channels contained in the signal received from the base station controller 14, and an optical switch matrix 82 that guides the wavelength channels to each remote unit (optical network unit 76a-76n) (see specification, column 6, lines 41-44; and column 7, lines 21-23). Therefore, each ONU (remote unit) 74a-74n only receives a single dedicated signal and not a "main" signal including two or more secondary signals. Thus, there is no teaching in Koonen that each ONU selects from the signal they receive (a main signal), a particular portion intended specifically for that ONU (a secondary signal). In fact, there is no need for the ONUs to make such a selection, because the particular portions are selected and separated from the main signal and routed to the ONUs by the flexible wavelength router 73.

Therefore, it is respectfully requested that the rejection of Claim 3 be withdrawn.

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Conclusion

In view of the amendments and remarks set forth in this Amendment and Response to Office Action, it is respectfully submitted that the Pending Application, including Claims 1-19, is in condition for allowance. Therefore, it is respectfully requested that the foregoing amendments be entered and the Pending Application be promptly allowed.

The Examiner is invited to contact the undersigned if such contact would in any way facilitate and expedite the prosecution of this application.

Respectfully submitted,

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